



Challenges of CHLB Implementation in the Coastal Areas of Penang District, Malaysia: A Qualitative Study Based on Questionnaire Responses

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Abstract

Clean and Healthy Living Behavior (CHLB) is a key component in improving public health, especially in coastal areas that are vulnerable to environmental and health issues. This study aims to identify the challenges in the implementation of Clean and Healthy Living Behavior (CHLB) in the coastal areas of Penang District, Malaysia. CHLB plays a crucial role in maintaining public health, particularly in coastal regions prone to health and environmental problems. This study employed a qualitative method, collecting data through questionnaires administered to 27 respondents selected via purposive sampling.

The survey results indicate that the educational levels of the respondents varied, with 2 people having never attended school, 12 having completed elementary school, 8 having completed middle school, and 5 having completed high school. In terms of occupation, the majority of respondents were housewives (16 people) and traders (10 people), with 1 person having another occupation. Most respondents (66.67%) had an income above IDR 200,000 per month. Knowledge about CHLB also varied, with 55.56% having heard of CHLB and 40.74% being unaware of the concept. A total of 69.26% of respondents practiced CHLB, while 30.74% did not. Only 37.04% of respondents had ever attended counseling on CHLB.

In conclusion, the main challenges in implementing CHLB in the coastal areas of Penang are the lack of access to information and education, as well as limited participation in counseling programs. Efforts to enhance counseling and education are essential to improve the adoption of CHLB in this region.

Keywords: CHLB, Coastal Communities, Implementation Challenges, Qualitative, Penang, Malaysia.

Introduction

Background of the Problem

Clean and Healthy Living Behavior (CHLB) is an integral part of public health efforts aimed at preventing disease and improving well-being. CHLB includes actions such as maintaining personal hygiene, using clean water, and proper waste management. In coastal communities, the implementation of CHLB is often influenced by the level of self-awareness among the community members, which refers to an individual's awareness of their own health condition and their habits in maintaining health (Hastuti, 2018). Self-awareness, in the context of health, is the individual's ability to recognize, assess, and manage risk factors to their health, as well as to adopt disease prevention behaviors (Azizah, 2019).

Self-awareness is important because it increases community awareness of the health risks they may face. This awareness subsequently influences their daily behaviors, including how they practice CHLB. Low self-awareness can lead to neglect of basic health practices, such as handwashing, using proper sanitation facilities, or good waste management. Conversely, a high level of self-awareness can encourage individuals to take greater responsibility for their health and that of their families, making it easier to adopt effective CHLB practices (Santoso, 2020).

Previous studies have shown that communities with low levels of self-awareness tend to experience more health problems due to a lack of knowledge and motivation to maintain their environmental cleanliness (Nugroho, 2017). Therefore, it is essential to understand how self-awareness affects the implementation of CHLB, especially in communities vulnerable to environmental and health challenges, such as coastal populations.

Context of Penang Region

The coastal area in Penang District, Malaysia, is known as one of the regions facing various environmental and health-related challenges. Coastal communities generally rely on marine resources for their livelihoods; however, they also encounter unique health risks, such as exposure to water pollution, poor sanitation, and limited access to healthcare facilities. Additionally, due to its proximity to the sea, this region is often affected by climate change, rising sea levels, and natural disasters such as floods, which can worsen sanitation conditions and exacerbate the spread of infectious diseases.

Although the Malaysian government has implemented various programs to improve the well-being of coastal communities, including health campaigns and the development of sanitation infrastructure, challenges in implementing CHLB remain significant. Low access to clean water and inadequate sanitation facilities are major barriers to the comprehensive application of CHLB (Ibrahim, 2019). Furthermore, social issues such as poverty and a lack of health education also contribute to the low awareness among the community about the importance of clean and healthy living behaviors (Zainal, 2021).

In Penang, coastal communities also face challenges related to habits and socio-cultural norms that are less supportive of CHLB implementation. For instance, some communities still practice open defecation due to a lack of proper sanitation facilities and use non-hygienic water for daily needs due to limited access to clean water sources. This further complicates the health issues in the region.

Problems Encountered

Despite numerous campaigns and educational programs that have been conducted, the awareness of coastal communities about the importance of self-awareness and clean and healthy living behaviors remains relatively low. Coastal communities in Penang tend to overlook simple CHLB practices, such as washing hands with soap, due to their misunderstanding of the significance of these behaviors in preventing infectious diseases. This low level of self-awareness exacerbates the health problems experienced by the community, as they do not have a sufficient understanding of the impact of their behaviors on personal and environmental health.

One of the main factors influencing low self-awareness in coastal communities is the lack of sustainable health education. Many government programs are only temporary, so communities do not receive enough information to internalize the importance of CHLB. Additionally, the lack of infrastructure support, such as adequate clean water and sanitation facilities, also affects the community's awareness of the importance of maintaining personal and environmental hygiene.

Awareness of self-awareness is crucial for enhancing CHLB practices because individuals with high awareness are more likely to take preventive steps to protect their health. For example, someone who is aware of the risk of infection will be more cautious about maintaining hand hygiene and the cleanliness of their surroundings. Conversely, those with low self-awareness tend to ignore health risks and fail to implement adequate preventive measures (Azizah, 2019).

Problem Formulation and Research Objectives

Based on the background, this research poses the main question: "To what extent does the level of self-awareness among coastal communities in Penang affect

the implementation of CHLB in the region?" This study aims to explore the relationship between self-awareness and the application of CHLB through a qualitative approach based on survey questionnaires. The main focus of this research is to identify the challenges faced by coastal communities in implementing CHLB and to analyze how the level of self-awareness plays a role in improving or worsening the implementation of CHLB.

The specific objectives of this research are:

1. To identify the challenges of CHLB for coastal communities in maintaining personal and environmental health.
2. To analyze the factors that hinder the implementation of CHLB in coastal communities.
3. To provide strategic recommendations to enhance the implementation of CHLB through increased self-awareness and health infrastructure support.

Through this research, it is hoped that effective solutions can be found to address the challenges in implementing CHLB in the coastal area of Penang, as well as to make a tangible contribution to improving the health of coastal communities.

Methods

Research Design

This study employs a qualitative method with a questionnaire-based survey approach to explore the challenges in implementing Clean and Healthy Living Behavior (CHLB) in the coastal communities of Penang District, Malaysia. A qualitative method was chosen because it allows the researcher to gain an in-depth understanding of the perspectives, attitudes, and experiences of the community regarding self-awareness and health behaviors (Creswell, 2014). Qualitative research also enables the researcher to analyze the factors that play a role in the implementation of CHLB more comprehensively, especially in the context of coastal communities that have unique social and cultural characteristics (Miles & Huberman, 1994).

Population and Sample

The population of this study consists of all coastal communities residing in Penang District, Malaysia. Coastal communities were selected because they face different environmental challenges compared to those in urban areas, such as limited access to sanitation, clean water, and healthcare facilities. The sample for this study was selected using purposive sampling techniques, where respondents were chosen based on specific criteria, namely those who have lived in the coastal area for at least

five years and are over 18 years old. Purposive sampling was employed to ensure that respondents have a sufficient understanding of health and hygiene conditions in the area (Patton, 2002).

Initially, a total of 100 respondents were selected to complete the prepared questionnaire. This number was considered sufficient to obtain representative data from coastal communities in the study area. Respondents were proportionally selected from several villages in Penang District to capture a variety of responses that reflect real conditions in the field. However, although the initial target was 100 individuals, in reality, only 27 respondents met the inclusion criteria and completed the entire data collection process. This was due to time constraints, limited field access, and ethical considerations inherent in the qualitative approach, which emphasizes data depth over quantity.

Research Instruments

The primary data collection instrument for this study is a structured questionnaire. This questionnaire is designed to measure two main aspects: self-awareness and Clean and Healthy Living Behavior (CHLB). The questionnaire consists of questions formulated using a 4-point Likert scale, where respondents are asked to indicate their level of agreement or disagreement with a series of statements. Some example questions in the questionnaire include: "I always wash my hands before eating," and "I am aware of the importance of maintaining the cleanliness of my home environment" (Santoso, 2020). This instrument also includes open-ended questions that allow respondents to provide further explanations regarding the challenges in implementing CHLB in coastal areas.

Before use, the questionnaire was tested on 10 respondents to ensure its validity and reliability. The pilot test results indicated that the questionnaire has good reliability, with a Cronbach's alpha coefficient above 0.7, indicating the internal consistency of the instrument (Sugiyono, 2019).

Data Collection Techniques

Data collection was carried out through the distribution of questionnaires to respondents both directly and online. For respondents with internet access, the questionnaire was sent via online platforms, while for those without access, the questionnaire was distributed directly by the researcher in the field (Ibrahim, 2019). This combined approach was used to ensure a high response rate and to minimize bias due to technological limitations in coastal areas.

The distribution of the questionnaire lasted for three weeks, allowing ample time to collect and return the questionnaires from the respondents. During the data

collection process, the researcher also communicated with respondents to explain the purpose of the study and provide guidance on filling out the questionnaire.

Data Analysis

The collected data were analyzed using thematic analysis to identify patterns and themes related to the challenges of implementing CHLB and the self-awareness of the community. Thematic analysis involves a coding process, where respondents' answers are categorized based on emerging themes from the data (Braun & Clarke, 2006). After coding, the researcher grouped the findings based on main themes related to the challenges faced by the community in implementing CHLB, such as infrastructure issues, low awareness, or social norms that hinder behavioral change.

The analysis process was conducted manually and with the assistance of NVivo software to facilitate the organization of large qualitative data sets (Basit, 2003). The results of the analysis were interpreted with reference to health behavior theories and previous research on the implementation of CHLB in coastal areas (Azizah, 2019). Data triangulation techniques were also used to ensure the validity of the research results, where findings from the questionnaire were compared with relevant secondary data, such as local public health reports.

Results

Survey on the Implementation of CHLB in the Coastal Area of Penang District

This study utilized a questionnaire to collect data from 27 respondents regarding their education level, occupation, income, knowledge, attitudes, and participation in counseling related to Clean and Healthy Living Behavior (CHLB). The following are the survey results:

A. Education Level in Relation to CHLB:

- | | |
|---------------------------------|----------------------|
| 1. No education | : 2 people (7.41%) |
| 2. Completed elementary school | : 12 people (44.44%) |
| 3. Completed junior high school | : 8 people (29.63%) |
| 4. Completed high school | : 5 people (18.52%) |

The majority of respondents have a basic education, with 44.44% having completed elementary school, which may affect their understanding of CHLB.

B. Employment Level in Relation to CHLB:

- | | |
|--------------|----------------------|
| 1. Household | : 16 people (59.26%) |
| 2. Traders | : 10 people (37.04%) |

3. Others : 1 person (3.7%)

Most respondents are housewives, followed by traders, which influences their behavior patterns and the implementation of CHLB.

C. Income Level in Relation to Clean and Healthy Living Behavior (CHLB)

1. Below IDR 200,000 per month : 33.33% (9 out of 27 respondents)
2. Above IDR 200,000 per month : 66.67% (18 out of 27 respondents)

The majority of respondents (66.67% or 18 individuals) had a monthly income above IDR 200,000, which may provide greater financial support for implementing Clean and Healthy Living Behavior (PHBS).

D. Knowledge Level about CHLB

1. Aware of PHBS : 55.56% (15 out of 27 respondents)
2. Not aware of PHBS : 44.44% (12 out of 27 respondents)

A total of 55.56% (15 individuals) of respondents reported being aware of PHBS. However, 44.44% (12 individuals) still lacked adequate information regarding this health-related behavior.

E. Respondents' Attitudes Toward CHLB

1. Practicing PHBS : 69.26% (18 out of 27 respondents)
2. Not practicing PHBS : 30.74% (9 out of 27 respondents)

The majority of respondents (69.26% or 18 individuals) showed a positive attitude by practicing PHBS, while 30.74% (9 individuals) did not.

F. Participation in CHLB Counseling

1. Attended counseling sessions : 37.04% (10 out of 27 respondents)
2. Never attended : 62.96% (17 out of 27 respondents)

Most respondents (62.96% or 17 individuals) had never participated in PHBS counseling sessions, which may contribute to their limited understanding of the importance of clean and healthy living behaviors.

From the results of this survey, it can be observed that the challenges in implementing CHLB in the coastal area of Penang are closely related to education level, knowledge, and participation in counseling.

Discussion

Challenges of Implementing CHLB in the Coastal Area of Penang District, Malaysia

This study aims to identify the challenges in implementing Clean and Healthy Living Behavior (CHLB) among the coastal communities in Penang District, Malaysia, based on the survey results from 27 respondents. Each survey item illustrates various factors that influence the application of CHLB in this area. The following is a comprehensive discussion of the survey results:

1. Education Level in Relation to CHLB

The survey shows that the majority of respondents have only a basic education level, with 44.44% having completed elementary school and 29.63% having completed junior high school. Education plays a crucial role in enhancing individuals' awareness and understanding of CHLB. According to Notoatmodjo (2010), education is directly related to an individual's level of health awareness and behavior. Low educational attainment can be a barrier to the implementation of CHLB, as the ability to comprehend health information, such as proper handwashing techniques or the importance of disposing of waste properly, may be suboptimal. In the context of coastal areas, limited access to education further exacerbates this condition, considering that coastal regions often face challenges in terms of infrastructure and information access.

2. Employment Level in Relation to CHLB

Most respondents are housewives (59.26%) and traders (37.04%). Household and informal work often do not provide formal education regarding health and sanitation. According to Suwondo (2016), an individual's employment status also affects access to health and sanitation information. Housewives may lack adequate time or access to receive health counseling, while traders, despite being economically active, may focus more on daily activities to meet financial needs rather than on maintaining environmental health. This situation leads to a lack of attention to the importance of implementing CHLB.

3. Income Level in Relation to CHLB

The survey results indicate that 33.33% of respondents have an income below IDR 200,000 per month, while 66.67% earn above IDR 200,000 per month. Low income significantly impacts the community's ability to implement CHLB. Tarmizi (2014) states that economic factors play a crucial role in determining the quality of an individual's health behavior, especially in areas with limited access to health facilities. For communities with low income, the primary

priority is meeting basic needs, such as food and shelter, which makes the implementation of CHLB less of a focus. This can also affect their ability to provide basic facilities such as soap, clean water, or adequate sanitation facilities.

4. Knowledge Level Regarding CHLB

The survey shows that 55.56% of respondents have previously heard of CHLB, while 44.44% have never been aware of it. Knowledge is a key factor in the implementation of good health behaviors. Green and Kreuter (2005) state that an individual's health knowledge significantly influences their attitudes and actions towards health. In coastal areas, this low level of knowledge may be due to limited access to information, infrequent health education activities, or even local culture that has not prioritized cleanliness and environmental health. This poses a significant challenge in efforts to enhance CHLB, especially in the absence of intensive and sustainable educational initiatives.

5. Respondents' Attitudes Towards CHLB

The respondents' attitudes towards the implementation of CHLB indicate that 69.26% practice CHLB, while 30.74% do not. A positive attitude towards CHLB is a good first step; however, this attitude does not fully reflect daily practices. Azwar (2010) states that attitudes are predispositions to act but do not always result in actual behavior without adequate knowledge and resources. Although many respondents express a positive attitude towards CHLB, limitations in knowledge and facilities, such as clean water and waste disposal options, can hinder the real implementation of CHLB in their daily lives.

6. Participation in CHLB Education

As many as 62.96% of respondents have never participated in CHLB-related education, while only 37.04% have done so. The low participation in health education indicates a lack of health promotion efforts in coastal areas. Health education plays a crucial role in increasing community knowledge and awareness of the importance of CHLB (Slamet, 2011). The lack of sustainable educational programs presents a serious challenge, especially in coastal areas that may be difficult for health workers to reach. More intensive efforts are needed to engage communities that have not yet been reached by health education programs.

Based on the findings of this study, the main challenges in implementing CHLB in Penang District include low education levels, limited knowledge, low participation in health education, and economic constraints. To address these challenges, a more integrated approach is necessary, including:

- Improving access to health education through regular outreach and health literacy programs targeted at low-education communities.
- Actively involving community members and local leaders to enhance participation in health education.
- Implementing subsidy programs or government support to provide basic facilities such as sanitation and clean water for low-income communities.
- Community-based education tailored to local conditions, considering that challenges in coastal areas differ from those in urban settings.

With these measures in place, it is hoped that the implementation of CHLB in the coastal area of Penang District can be more effective and sustainable.

Conclusion and Recommendation

Conclusion

Based on the research findings regarding the challenges of implementing Clean and Healthy Living Behavior (CHLB) in the coastal area of Penang District, Malaysia, several conclusions can be drawn. First, the education level of respondents significantly influences their understanding and implementation of CHLB. The majority of respondents, who have only attained primary education (elementary and junior high), demonstrate low knowledge of the CHLB concept, which impacts their health behaviors. Second, the occupations of respondents, particularly dominated by housewives and traders, also affect their awareness of CHLB. Daily routines and limited access to information become obstacles to optimal CHLB implementation. Third, lower income levels serve as a limiting factor, as those earning below Rp200,000 tend to have lower knowledge of CHLB.

Additionally, although the majority of respondents (55.56%) have heard of CHLB, 44.44% still lack knowledge about it. Attitudes towards CHLB also reveal a gap; while 69.26% of respondents strive to implement CHLB, 30.74% do not practice it, indicating the need for increased motivation and education. The fact that 62.96% of respondents have never participated in CHLB education further underscores that health promotion programs in coastal areas are still ineffective.

Recommendations

Based on the conclusions drawn, several recommendations can be made to improve the implementation of CHLB in the coastal area of Penang District as follows:

1. **Enhancement of Health Education Programs:** There is a need for more intensive and targeted educational programs for coastal communities, focusing on groups with low education and income levels. These programs should be designed inclusively, with a participatory approach so that the community better understands and independently applies CHLB.

2. **Improvement of Information Access:** Given that many respondents lack knowledge of CHLB, efforts should be made to enhance access to information through media that are easily reachable by coastal communities, such as radio, brochures, or community activities.
3. **Provision of Facilities and Infrastructure:** To support the implementation of CHLB, local governments need to provide adequate public facilities, such as handwashing stations and proper sanitation, accessible to the entire community, especially in densely populated areas.
4. **Involvement of Health Workers and Community Leaders:** Local health workers and community leaders can act as change agents in raising awareness and compliance with CHLB among the community. With appropriate training, they can drive more effective behavioral change.

With these measures, it is hoped that the implementation of CHLB in the coastal area of Penang District can be improved, thereby maintaining the overall health of the community.

References

- Azizah, N. (2019). *Self-Reflection and Health Behavior: An Approach in CHLB*. Yogyakarta: Pustaka Kesehatan.
- Azwar, S. (2010). *Human Attitudes: Theory and Measurement*. Pustaka Pelajar, Yogyakarta.
- Basit, T. N. (2003). "Manual or electronic? The role of coding in qualitative data analysis." *Educational Research*. DOI:[10.1080/0013188032000133548](https://doi.org/10.1080/0013188032000133548)
- Braun, V., & Clarke, V. (2006). "Using thematic analysis in psychology." *Qualitative Research in Psychology*. DOI:[10.1191/1478088706qp063oa](https://doi.org/10.1191/1478088706qp063oa)
- Creswell, J. W. (2014). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. Sage Publications.
- Green, L. W., & Kreuter, M. W. (2005). *Health Program Planning: An Educational and Ecological Approach*. McGraw-Hill, New York.
- Hastuti, R. (2018). *Public Health and Clean Living Behavior*. Jakarta: Penerbit Ilmiah Indonesia.

- Ibrahim, M. (2019). *Sanitation in Coastal Areas and Its Implications for Health*. Kuala Lumpur: Universiti Malaysia.
- Miles, M. B., & Huberman, A. M. (1994). *Qualitative Data Analysis: An Expanded Sourcebook*. Sage Publications.
- Notoatmodjo, S. (2010). *Health Education and Health Behavior*. Rineka Cipta, Jakarta.
- Nugroho, A. (2017). *Clean and Healthy Living Behavior in Vulnerable Communities*. Surabaya: Universitas Airlangga Press.
- Patton, M. Q. (2002). *Qualitative Research & Evaluation Methods*. Sage Publications.
- Santoso, D. (2020). *Health Behavior and Its Influence on Coastal Communities*. Malang: Universitas Negeri Malang Press.
- Slamet, J. S. (2011). *Health Promotion and Health Behavior*. Andi Offset, Yogyakarta.
- Sugiyono. (2019). *Research Methods: Quantitative, Qualitative, and R&D*. Bandung: Alfabeta.
- Suwondo, T. (2016). *Public Health in Coastal Areas*. Pustaka Obor, Jakarta.
- Tarmizi, R. (2014). *Factors Influencing Health Behavior*. Media Kesehatan Masyarakat Indonesia, Jakarta.
- Zainal, M. (2021). *Poverty and Health Among Coastal Communities in Malaysia*. Kuala Lumpur: Dewan Bahasa dan Pustaka.